

## SGCN and Stressors Associated with Habitats

### Macrogroup: Subtidal Pelagic (Water Column)

#### Habitat Systems within Macrogroup:

**MacrogroupName** Subtidal Pelagic (Water Column)

Confined Channel

Nearshore

Offshore

Pelagic (Water Column) Macrogroup - Unknown Habitat System (i.e. Macrogroup)

Upwelling Zones

**Description:** Adopted from CMECS: The Subtidal pelagic environment includes waters from the coastline to the central oceans. Salinity may range from 0-35ppt. This system has dilution from fresh water near the mouths of estuaries and rivers. Spalding et al. (2007) in Marine Ecosystems of the World (MEOW), adopted by CMECS

#### SGCN Associated With This Habitat

Total SGCN: 1: 17 2: 38 3: 25

Class	<i>Actinopterygii</i> (Ray-finned Fishes)	SGCN Category
Species	<i>Alosa pseudoharengus</i> (Alewife)	2
Species	<i>Anguilla rostrata</i> (American Eel)	2
Species	<i>Ammodytes americanus</i> (American Sand Lance)	3
Species	<i>Alosa sapidissima</i> (American Shad)	1
Species	<i>Thunnus thynnus</i> (Atlantic Bluefin Tuna)	2
Species	<i>Gadus morhua</i> (Atlantic Cod)	1
Species	<i>Salmo salar</i> (Atlantic Salmon)	1
Species	<i>Acipenser oxyrinchus</i> (Atlantic Sturgeon)	1
Species	<i>Alosa aestivalis</i> (Blueback Herring)	1
Species	<i>Salvelinus fontinalis</i> (Brook Trout)	3
Species	<i>Osmerus mordax</i> (Rainbow Smelt)	1
Species	<i>Acipenser brevirostrum</i> (Shortnose Sturgeon)	1
Species	<i>Morone saxatilis</i> (Striped Bass)	2
Class	<i>Anthozoa</i> (Corals, Sea Pens, Sea Fans, Sea Anemones)	SGCN Category
Species	<i>Gersemia rubiformis</i> (Sea Strawberry)	2
Class	<i>Asteroidea</i> (Sea Stars)	SGCN Category
Species	<i>Asterias rubens</i> (Common Sea Star)	2
Species	<i>Crossaster papposus</i> (Common Sun Star)	2
Species	<i>Asterias forbesi</i> (Forbes's Starfish)	2
Species	<i>Solaster endeca</i> (Purple Sunstar)	2
Species	<i>Stephanasterias albula</i> (White Sea Star)	2
Class	<i>Aves</i> (Birds)	SGCN Category
Species	<i>Sterna paradisaea</i> (Arctic Tern)	1
Species	<i>Fratercula arctica</i> (Atlantic Puffin)	2
Species	<i>Bucephala islandica</i> (Barrow's Goldeneye)	1
Species	<i>Chroicocephalus philadelphia</i> (Bonaparte's Gull)	3
Species	<i>Gavia immer</i> (Common Loon)	3
Species	<i>Uria aalge</i> (Common Murre)	3
Species	<i>Sterna hirundo</i> (Common Tern)	2
Species	<i>Phalacrocorax carbo</i> (Great Cormorant)	1
Species	<i>Puffinus gravis</i> (Great Shearwater)	3

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Species	<i>Aythya marila</i> (Greater Scaup)	2
Species	<i>Histrionicus histrionicus</i> (Harlequin Duck)	1
Species	<i>Podiceps auritus</i> (Horned Grebe)	3
Species	<i>Leucophaeus atricilla</i> (Laughing Gull)	3
Species	<i>Oceanodroma leucorhoa</i> (Leach's Storm-petrel)	3
Species	<i>Clangula hyemalis</i> (Long-tailed Duck)	3
Species	<i>Alca torda</i> (Razorbill)	2
Species	<i>Phalaropus fulicarius</i> (Red Phalarope)	3
Species	<i>Phalaropus lobatus</i> (Red-necked Phalarope)	2
Species	<i>Gavia stellata</i> (Red-throated Loon)	3
Species	<i>Sterna dougallii</i> (Roseate Tern)	1
Class	<b><i>Bivalvia</i> (Marine And Freshwater Molluscs)</b>	<b>SGCN Category</b>
Species	<i>Zirfaea crispata</i> (Atlantic Great Piddock)	2
Species	<i>Placopecten magellanicus</i> (Atlantic Sea Scallop)	3
Species	<i>Mytilus edulis</i> (Blue Mussel)	3
Species	<i>Crassostrea virginica</i> (Eastern Oyster)	3
Species	<i>Mya truncata</i> (Gaper Clam)	3
Species	<i>Mercenaria mercenaria</i> (Hard-shelled Clam)	3
Species	<i>Chlamys islandica</i> (Icelandic Scallop)	3
Species	<i>Mya arenaria</i> (Softshell Clam)	3
Class	<b><i>Chondrichthyes</i> (Sharks, Rays, And Skates)</b>	<b>SGCN Category</b>
Species	<i>Dipturus laevis</i> (Barndoor Skate)	2
Species	<i>Prionace glauca</i> (Blue Shark)	3
Species	<i>Alopias vulpinus</i> (Common Thresher Shark)	3
Species	<i>Lamna nasus</i> (Porbeagle)	2
Species	<i>Isurus oxyrinchus</i> (Shortfin Mako)	2
Species	<i>Sphyrna zygaena</i> (Smooth Hammerhead)	3
Species	<i>Malacoraja senta</i> (Smooth Skate)	2
Species	<i>Amblyraja radiata</i> (Thorny Skate)	2
Class	<b><i>Echinoidea</i> (Sea Urchins)</b>	<b>SGCN Category</b>
Species	<i>Strongylocentrotus droebachiensis</i> (Green Sea Urchin)	2
Class	<b><i>Gastropoda</i> (Aquatic And Terrestrial Snails)</b>	<b>SGCN Category</b>
Species	<i>Arrhoges occidentalis</i> (American Pelican Foot)	2
Species	<i>Limacina helicina</i> (Limacina Snail)	3
Species	<i>Ptychotractus ligatus</i> (Spindle Shell)	2
Species	<i>Limneria undata</i> (Wavy Lamellaria)	3
Class	<b><i>Holothuroidea</i> (Sea Cucumbers)</b>	<b>SGCN Category</b>
Species	<i>Cucumaria frondosa</i> (Orange-footed Sea Cucumber)	2
Species	<i>Psolus fabricii</i> (Psolus)	2
Species	<i>Psolus phantapus</i> (Psolus)	2
Class	<b><i>Malacostraca</i> (Crustaceans)</b>	<b>SGCN Category</b>
Species	<i>Pandalus borealis</i> (Northern Shrimp)	1
Species	<i>Lebbeus polaris</i> (Polar Lebbeid Shrimp)	2

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Species	<i>Lebbeus groenlandicus</i> (Spiny Lebbeid Shrimp)	2
Class	<i>Mammalia</i> (Mammals)	SGCN Category
Species	<i>Balaenoptera musculus</i> (Blue Whale)	2
Species	<i>Balaenoptera physalus</i> (Finback Whale)	2
Species	<i>Phocoena phocoena</i> (Harbor Porpoise)	2
Species	<i>Megaptera novaeangliae</i> (Humpback Whale)	1
Species	<i>Eubalaena glacialis</i> (North Atlantic Right Whale)	1
Species	<i>Balaenoptera borealis</i> (Sei Whale)	2
Species	<i>Physeter macrocephalus</i> (Sperm Whale)	2
Class	<i>Maxillopoda</i> (Crustaceans)	SGCN Category
Species	<i>Calanus finmarchicus</i> (A Copepod)	3
Class	<i>Merostomata</i> (Horseshoe Crabs And Sea Scorpions)	SGCN Category
Species	<i>Limulus polyphemus</i> (Horseshoe Crab)	1
Class	<i>Reptilia</i> (Reptiles)	SGCN Category
Species	<i>Chelonia mydas</i> (Green Seaturtle)	2
Species	<i>Lepidochelys kempii</i> (Kemp's Ridley Seaturtle)	2
Species	<i>Dermochelys coriacea</i> (Leatherback Seaturtle)	1
Species	<i>Caretta caretta</i> (Loggerhead Seaturtle)	2
Class	<i>Rhynchonellata</i> (Brachiopods)	SGCN Category
Species	<i>Terebratulina septentrionalis</i> (Lamp Shell)	2

Endangered (E) and Threatened (T) Plant Species Associated With This Habitat: None assigned

## SGCN and Stressors Associated with Habitats

### Macrogroup: Subtidal Pelagic (Water Column)

#### Stressors Associated With This Macrogroup

**IUCN Level 2 Threat Name: Agricultural and Forestry Effluents**

**Notes:** Though this threat has been drastically reduced with the implementation of best management practices, in coastal watersheds, excess runoff of nutrients, fertilizer, sedimentation, and pesticides can lead to poor water quality in tidal areas and lead to exc

**IUCN Level 2 Threat Name: Dams and Water Management-Use**

**Notes:** Where dams cut off tidal flow the habitat is completely altered and fish passage obstructed.

**IUCN Level 2 Threat Name: Domestic and Urban Waste Water**

**Notes:** Though this threat can be reduced with the implementation of best management practices, in coastal watersheds, runoff can lead to non-point source pollution of nutrients, fertilizer, sediments, pesticides, vehicle contaminants, etc., which can lead to poor

**IUCN Level 2 Threat Name: Fishing and Harvesting of Aquatic Resources**

**Notes:** Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

**IUCN Level 2 Threat Name: Garbage and Solid Waste**

**Notes:** Lost fishing gear, discarded plastics, boat mechanic fluid containers (oil, antifreeze). Sometimes can be retrieved (ghost gear programs), but is generally lost especially if offshore.

**IUCN Level 2 Threat Name: Habitat Shifting or Alteration**

**Notes:** Chemical changes in water chemistry (e.g. ocean acidification) can affect biological communities and natural processes

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**IUCN Level 2 Threat Name: Industrial and Military Effluents**

**Notes:** Release of effluents may contain high concentrations of toxic contaminants, etc. largely effects nearshore habitat, where impact can be long term. Oil spills can effect nearshore or offshore environments and can be either localized (if contained or small)

**IUCN Level 2 Threat Name: Invasive Non-native-Alien Species-Diseases**

**Notes:** Tropical species are appearing in Gulf of Maine waters, with unknown impacts

**IUCN Level 2 Threat Name: Lack of knowledge**

**Notes:** Gulf of Maine waters are undergoing fast paced and serious changes due to climate change, changes in fish assemblages, etc. The pelagic environment is understudied and the effect of changes on biological communities is largely unknown.

**IUCN Level 2 Threat Name: Marine and Freshwater Aquaculture**

**Notes:** Most effects from finfish aquaculture have been successfully mitigated through the establishment of industry standards that have resulted in drastically reduced algal growth and improved water quality. Activities that use similar species (propagated

**IUCN Level 2 Threat Name: Recreational Activities**

**Notes:** Fishing for pelagic species often produces a large amount of bycatch. Large pelagic predators inhabit this ecosystem. Their removal in high numbers can lead to large scale trophic changes.

**IUCN Level 2 Threat Name: Renewable Energy**

**Notes:** Mounting equipment and transmission cables for floating offshore wind turbines. Also proposed tidal barrages and other hydropower or tidal power structures can block marine organisms.

**IUCN Level 2 Threat Name: Roads and Railroads**

**Notes:** Where roads and railroads cut off tidal flow the habitat is completely altered and fish passage obstructed. Undersized culverts are generally constructed at head of tide and can reduce area of tidal marshes and limit fish passage.

**IUCN Level 2 Threat Name: Shipping Lanes**

**Notes:** Animal-vessel strikes, associated pollution and waste-water discharge

**IUCN Level 2 Threat Name: Temperature Extremes**

**Notes:** Sea surface temperature increases may change the community structure; exacerbate disease, etc.

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#### Habitat Conservation Actions:

Relevant conservation actions for this habitat are assigned within broader habitat groupings in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

#### Species Conservation Actions:

Conservation actions that may benefit species associated with this habitat can be found in Maine's 2015 Wildlife Action Plan: Element 1, Table 1-3. Click on the species of interest to launch a species based report summarizing relevant conservation actions and associated habitats.

*The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.*